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Brugger

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[54] DEVICE FOR THE DISTRIBUTION OF MUSIC INFORMATION IN DIGITAL FORM

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[58] Field of Search 380/4, 9, 10, 19, 380/28, 49, 50, 59, 23, 25; 370/110.1; 381/77, 81; 340/825.31, 825.34

[56] References Cited

U.S. PATENT DOCUMENTS

4,710,921 12/1987 Ishidoh et al. 370/110.1
 4,789,863 12/1988 Bush 340/825.35
 4,790,010 12/1988 Sgrignoli 380/10
 4,991,207 2/1991 Shiraishi et al. 380/9
 5,191,611 3/1993 Lang 380/4 X
 5,208,665 5/1993 McCalley et al. 348/12

FOREIGN PATENT DOCUMENTS

0416455 9/1990 European Pat. Off. H04N 7/167

[57] ABSTRACT

In order to distribute music information from a central memory device (2) via a communications network (4) to a terminal (6), this information is organized in a digital music information object. The latter comprises a core having basic information relating to the music information object, as well as a number of additional layers having the actual music information. The core includes an encryption table, on the basis of which an encryption module (30) of the central memory device (2) and a decryption module (32) of the terminal (6) respectively encrypt and decrypt the music information object. Furthermore, an interpretation module (34) is provided in the terminal (6) for reproduction conditioning of the music information object, which interpretation module (34) accesses information for checking the authorized use of the music information object, which information is stored in an authorization device (36) and identifies the terminal or the consumer. The invention thus creates a technique for distribution of digital music information which on the one hand provides effective mechanisms for the protection of copyrights and on the other hand makes possible increased services for the consumer.

19 Claims, 2 Drawing Sheets

